

FIG. 1

006280" 9E2T5960

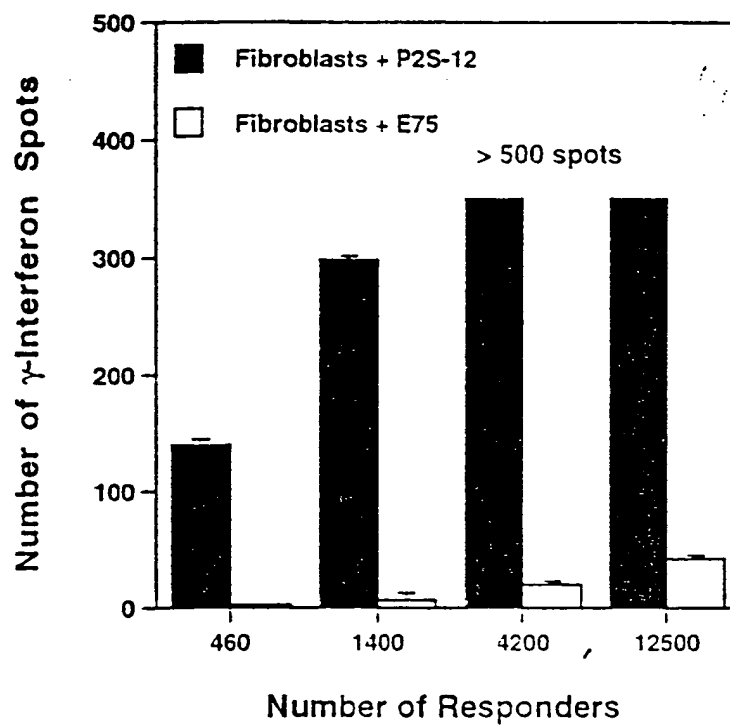


FIG. 2A

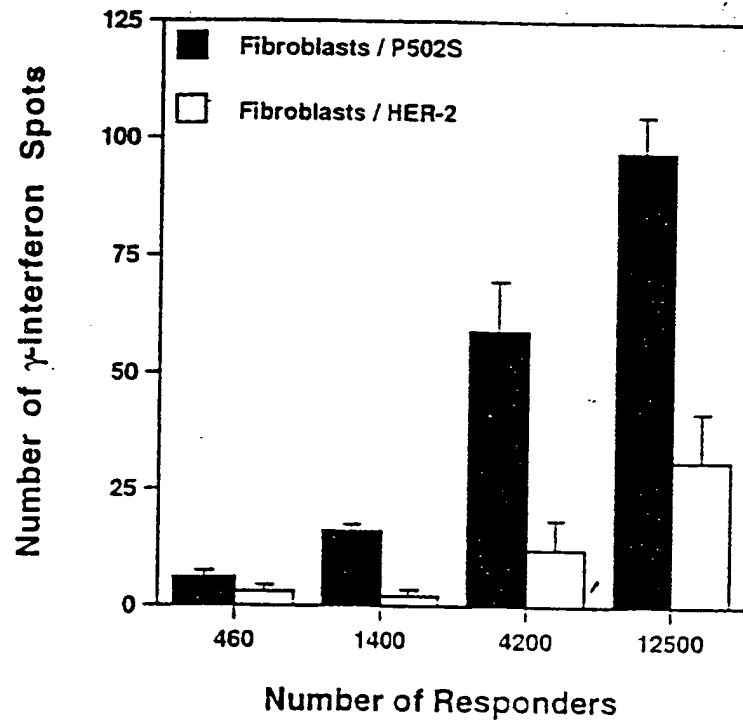
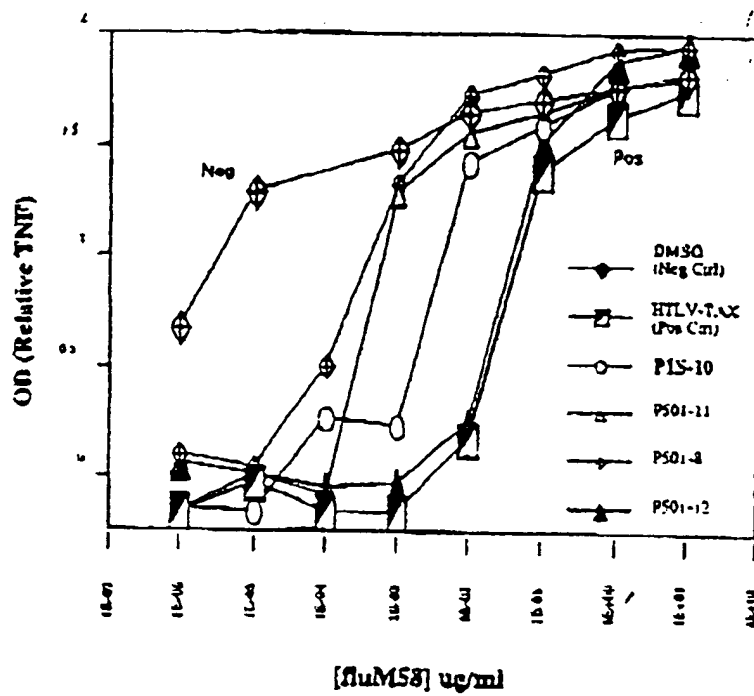


FIG. 2B

006280" 91275960



Figure

3

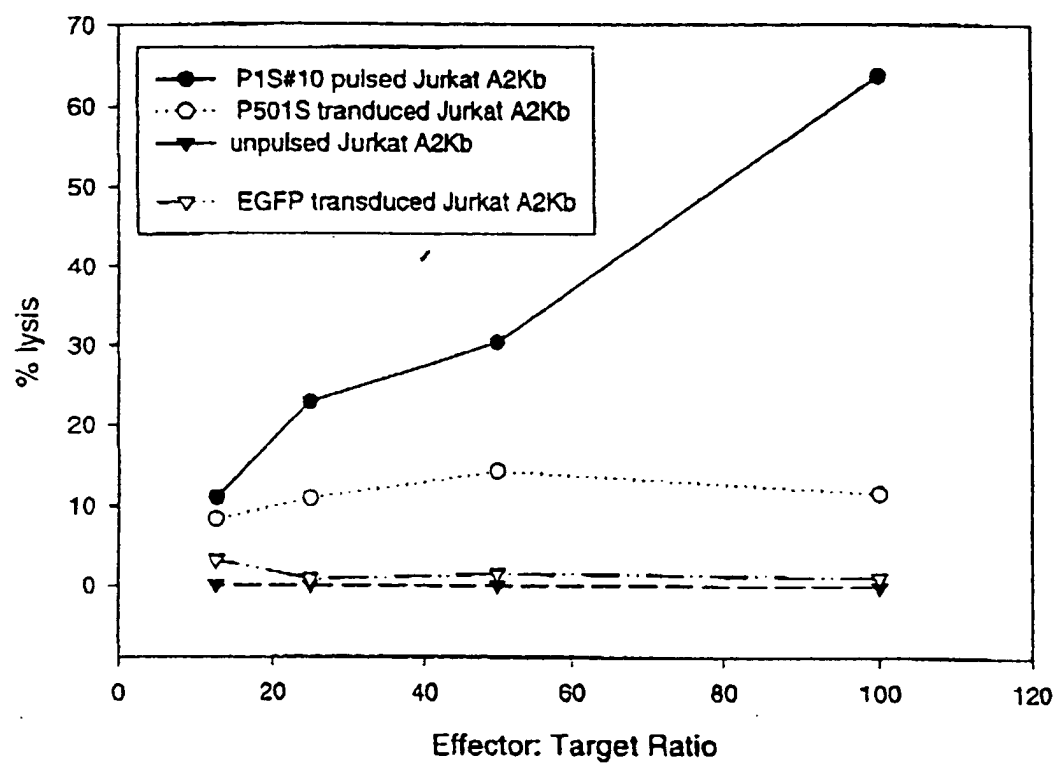


Figure 4

006280" 91275960

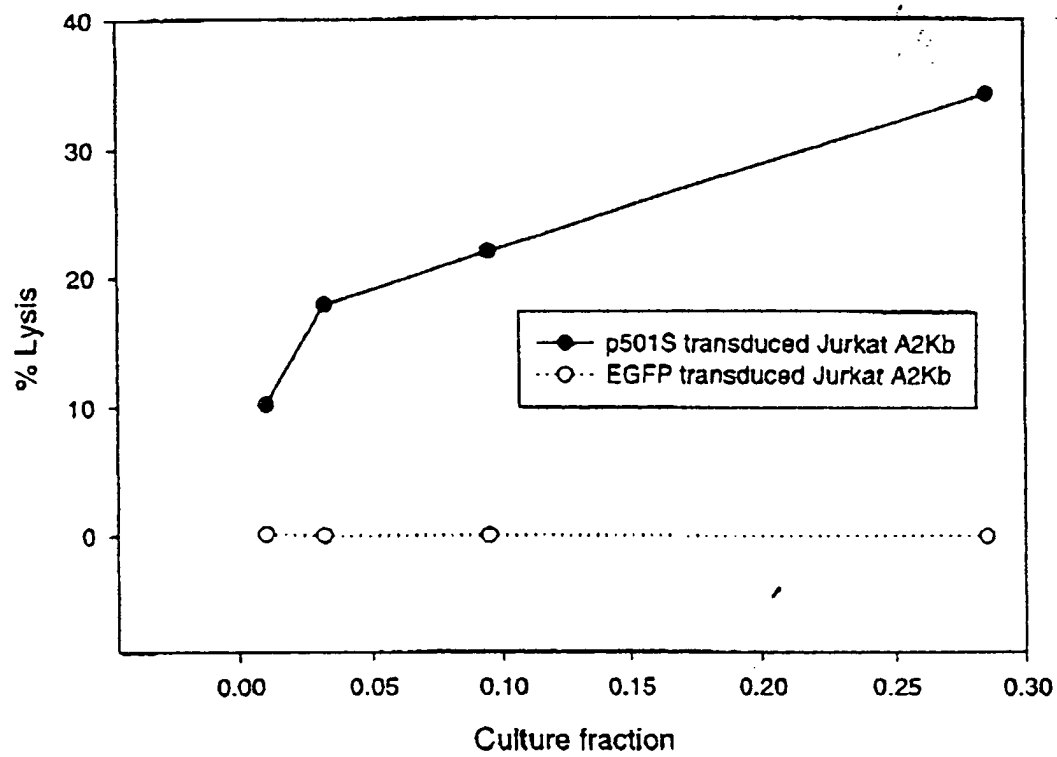
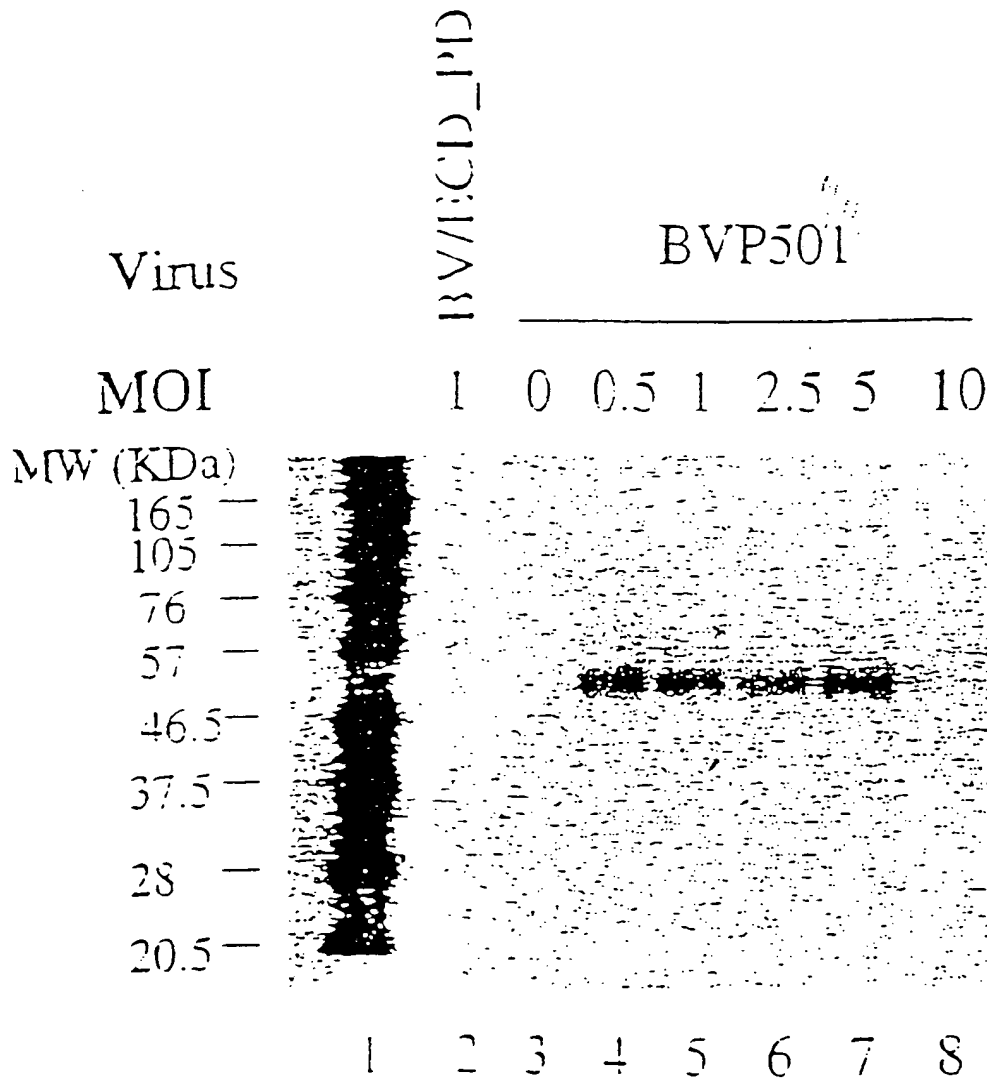


Figure 5

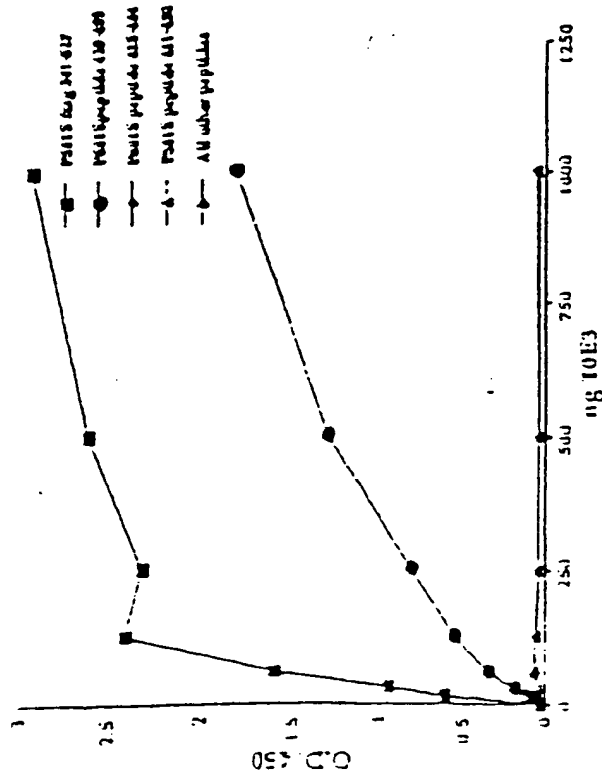
Expression of P501S by the Baculovirus Expression System



0.6 million high 5 cells in 6-well plate were infected with an unrelated control virus BV/ECD_PD (lane 2), without virus (lane 3), or with recombinant baculovirus for P501 at different MOIs (lane 4-8). Cell lysates were run on SDS-PAGE under the reducing conditions and analysed by Western blot with a monoclonal antibody against P501S (P501S-10E8-G4D3). Lane 1 is the biotinylated protein molecular weight marker (8 kDa).

Fig. 7

Figure 8. Mapping of the epitope recognized by 10E3-G4-D3

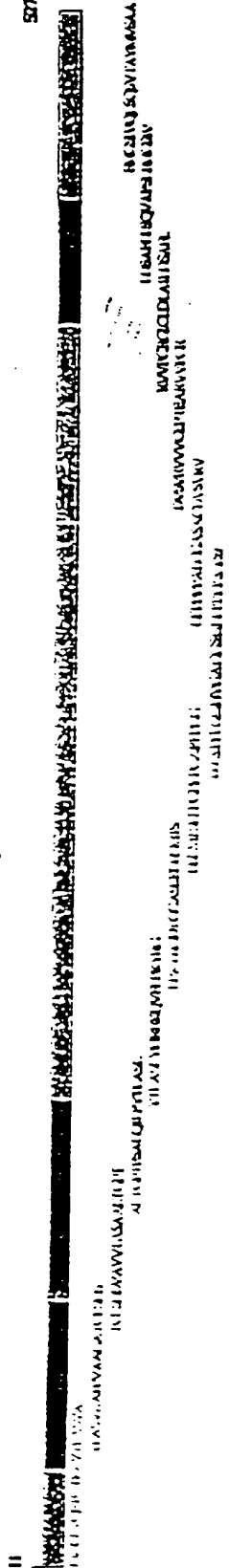


Legend:
 [] : PHLIS exposure
 [] : Threshold value of mean

Full-length PHLIS



PHLIS fragment used for immunization



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Figure 1. Schematic of P501S with predicted transmembrane, cytoplasmic, and extracellular regions

AVQRCWVSRIRRK AQLIYNLLTTEGLEVCTAAGHT YVPPILLLEVGVEERKMTMVLGIGPVVLGLVCPILLGSAS
 DWWRGRYGRRRP EIWALSGLLSLEIPRAGWL AGLLCTDPRPLE LALLHGVGLLDFCGQVCFITPL
 FALLSDLEFRDPDHCRQ AYSYVAFHSLGGCTGNYLTPAL DWIVTSALAPVLCIQEE
 CLPGLLETLFLTCVNAATLLY AFEAAIGPTEPAEGHSAPSLSPHCCTPRARAFRNIGALLPRI
 HQLCRRAPPTLRR LPYAFELCSWMAMLTFTFYEDP VGRGLYQGVTPRAKGTETARRHIYDEGVR
 MGSILGLFLQCAISLVESLYM DRIVQRECTRAVYLAS VAAFPYAAGATCLSHSVAYVTA SAA
 LTGETSALOILPYTLASLY HREKQVFLPKYRGDTGGASSEDSTATSEFLPGPKPGAPFPNGHIVGAGGSGL
 LPPPPALCGASACDVSVRVVGTEPTEARVVPGRG ICLDLAHLDSAPLLSQVAPSLF MGSIVQLSQS
 VTAYMVSAAGLGLVATYFAT QVVFDKSLAKTSA

Underlined sequence: Predicted transmembrane domain; Bold sequence: Predicted extracellular domain;
 Italic sequence: Predicted intracellular domain. Sequence in bold/underlined: used to generate polyclonal rabbit serum

Localization of domains predicted using HMMTOP (G.E. Tusnady and I. Simon (1998) Principles
 Governing Amino Acid Composition of Integral Membrane Proteins: Applications to topology Prediction.J.Mol Biol. 283,
 489-506.

Genomic Map of (5) Corixa Candidate Genes

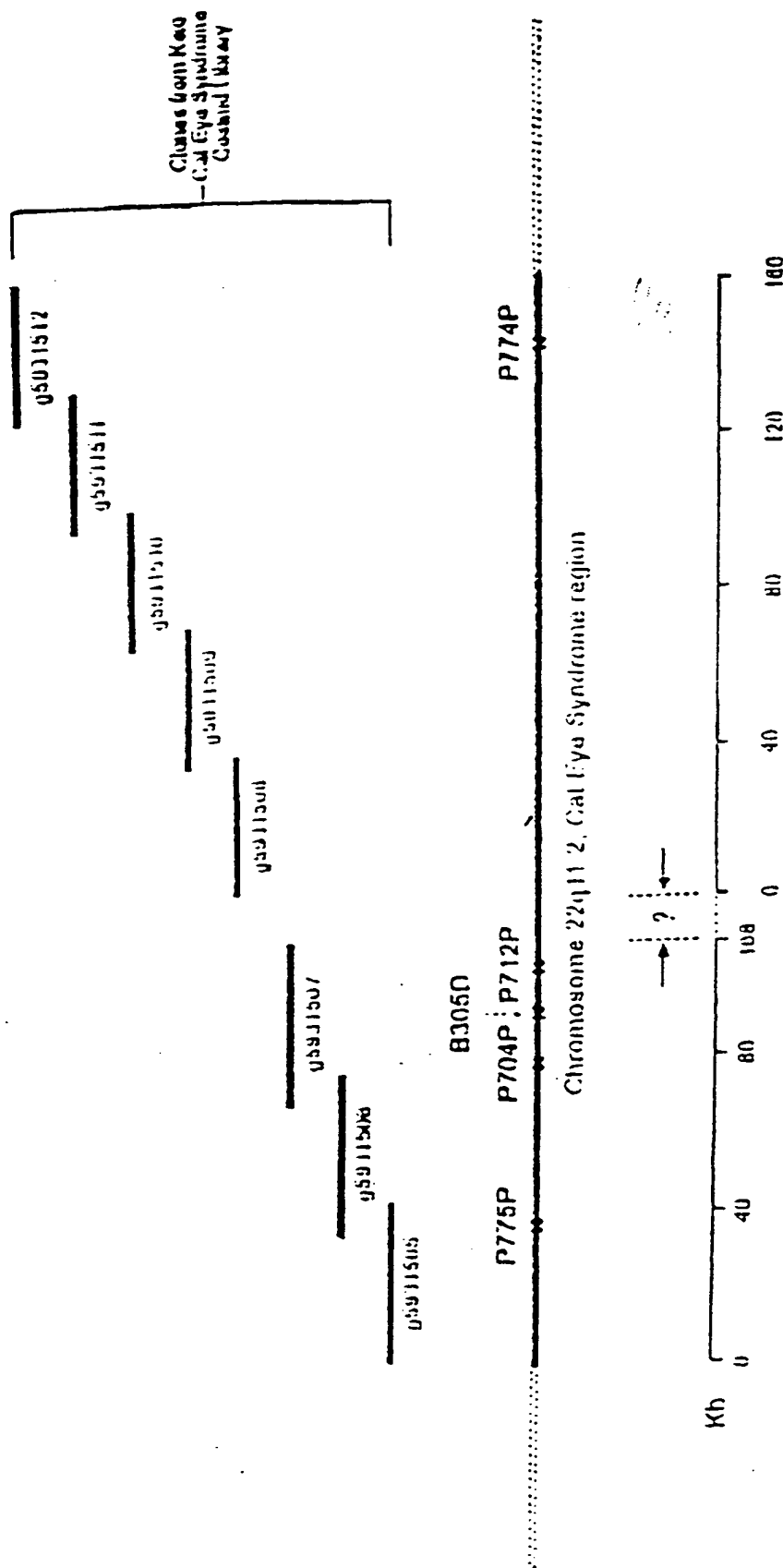


Fig. 10

11
FIGURE 4. Elisa assay of rabbit polyclonal antibody specificity

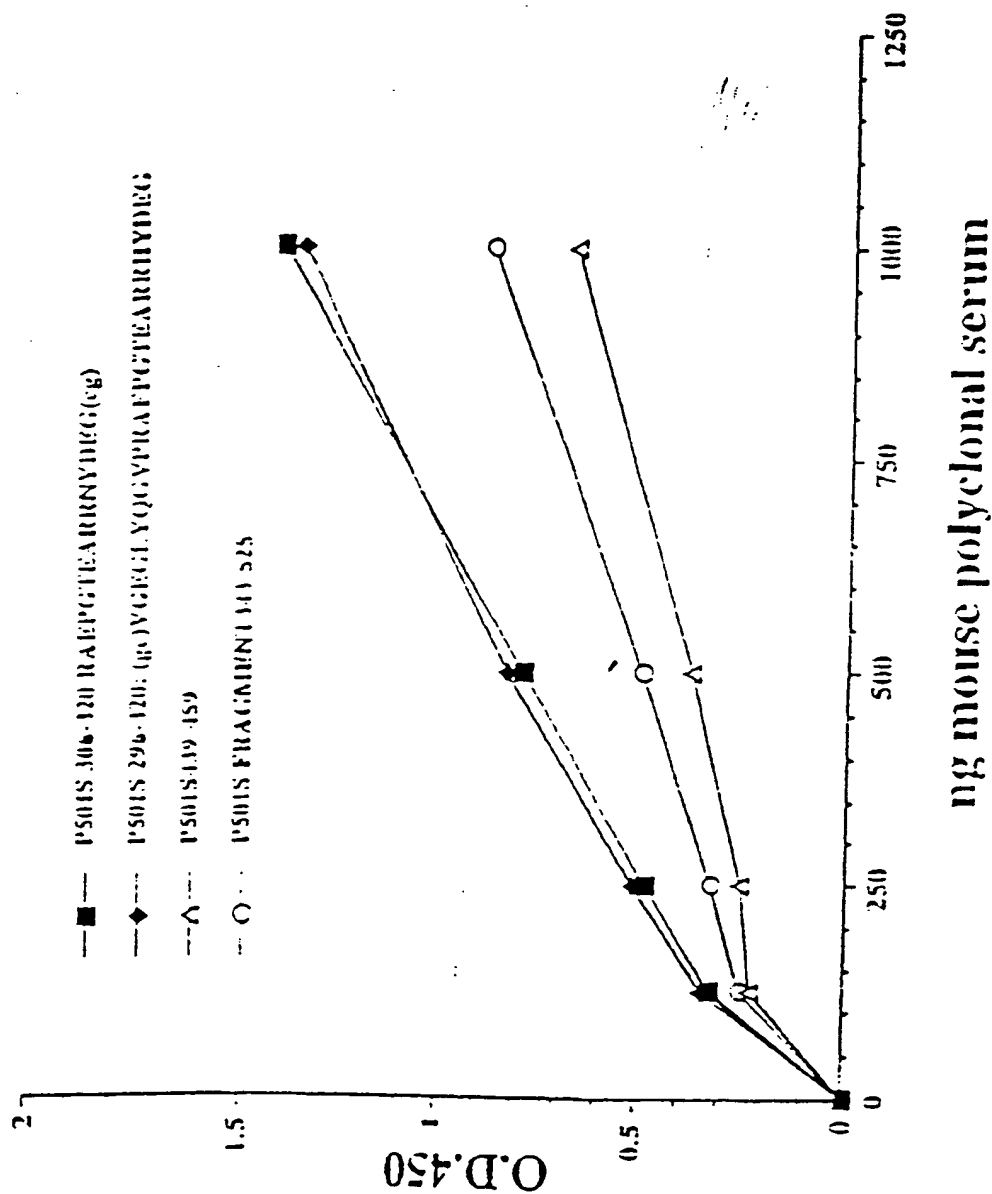


Fig. 11

10 20 30 40 50 60 70

GTCACCTTAGGAAAAGGTGTCCTTTTCGGGCAGCCGGGCTCAGCATGAGGAACAGAAGGAATGACACTCTGG 70
ACAGCACCCCGGACCCTGTACTCCAGCGCGTCTCGGAGCACAGACTTGTCTTACACTGAAAGCGACTTGGT 140
GAATTTTATTCAAGCAAATTTTAAGAAACGAGAAATGTGTCTTCTTTACCAAAGATTCCAAGGCCACGGAG 210
AATGTGTGCAAGTGTGGCTATGCCCAGAGCCAGCACATGGAAGGCACCCAGATCAACCAAAGTGAGAAAT 280
GGAAC TACAAGAAACACACCAAGGAATTTCTTACCAGCGCTTTGGGGATATTTCAGTTTGAGACACTGGG 350

360 370 380 390 400 410 420

GAAGAAAAGGGAAGTATATACGTCTGTCTTGCAGACAGGACGGGAAATCCTTTACGAGCTGCTGACCCAG 420
CACTGGCAGCTGAAAAACAACCAACCTGGTCAATTTCTGTGACCGGGGGCGCCAAGAAGCTTCGCCCTGAAGC 490
CGCGCATGCGCAAGATCTTCAGCCGGCTCATCTACATCGCGCAGTCCAAAGGTGCTTGGATTCTCACGGG 560
AGGCACCCATTATGGCCTGACGAAGTACATCGGGGAGGTGGTGAGAGATAACACCATCAGCAGGAGTTCA 630
GAGGAGAATATTGTGGCCATTGGCATAGCAGCTTGGGGCATGGTCTCCAAACGGGACACCCCTCATCAGGA 700

710 720 730 740 750 760 770

ATTGCGATGCTGAGGGCTATTTTTTAGCCCAAGTACCTTATGGATGACCTCACAAGGGATCCACTGTATAT 770
CCTGGACAACAACACACACATTTGCTGCTCGTGGACAAATGGCTGTGATGGACATCCCACTGTGGAAGCA 840
AAGCTCCGGAATCAGCTAGAGAAGCATATCTGTGAGCGCACTATTCAAGATTCCAATATGGTGGCAAGA 910
TCCCCATTGTGTGTTTGGCCCAAGGAGGTGGAAAAGAGACTTTGAAAGCCATCAATACCTCCATCAAAAA 980
TAAAAATTCCTGTGTGGTGGTGGAAAGGCTCGGGCCGGATCGCTGATGGATCGCTAGCCTGGTGGAGGTG 1050

1060 1070 1080 1090 1100 1110 1120

GGAGGATGCCCGACATCTTCTGCGGTCAAGGAGAAGGTGGTGGGCTTTTACCCCGCACGGTGTCTCGGC 1120
GTGTCTGAGGAGGAGACTGAGAATTTGGATCAAAATGGGTCAAAAGAAATTTCTCGAATGTTCTCACCTATTAC 1190
TAGTTATTAATAATGGAAGAAGCTGGGGATGAAATTTGTGAGCAATGCCATCTCTACGCTCTATACAAAGCC 1260
GTTCAAGCACCAGTGAGCAAGACAAGGATAAATGGAATGGGCAGCTGAAGCTTCTGTGGAGTGGAAACAGC 1330
GTGGACTTAGCCAATGATGAGATTTTACCCAATGACCGCGGATGGGAGTCTGCTGACCTTCAAGAAATCAT 1400

1410 1420 1430 1440 1450 1460 1470

GTTTACGGCTCTCATAAAGGACAGACCCAAAGTTGTCCGCTCTTTCTGGAGAATGGCTTGAACCTACGG 1470
AAGTTTCTCACCCATGATGTCTCACTGAACTCTCTCCAAACCACTTCAGCACGCTTGTGTACCGGAATC 1540
TGCAGATCGCCAAGAATTCTTATAATGATGCCCTCTCTACGTTTGTCTGGAAACTGGTTGCGAACTTCCG 1610
AAGAGGCTTCGGGAAGGAAGACAGAAATGGCCGGGACGAGATGGACATAGAAGCTCCACGACGTGTCTCT 1680
ATTACTCGGCACCCCTGCAAGCTCTCTTCATCTGGGCCATTCTTCAGAAAGGAAGGAAGCTCTCCAAAG 1750

1760 1770 1780 1790 1800 1810 1820

TCATTTGGGAGCAGACCAGGGGCTGCACTCTGBCAGCCCTGCGAGCCAGCAAGCTTCTGAAGACTCTGGC 1820
CAAAGTGAAGAAGCAGATCAATGCTGCTGGGGAGTCCGAGGAGCTGGCTAATGAGTACGAGACCCGGGCT 1890
GTTGAGCTGTTCACTGAGTGTTCAGGCAGCGATGAAGACTTGGCAGAACAGCTGCTGGTCTATTCTGTG 1960
AAGCTTGGGGTGGAAAGCAACTGTCTGGAGCTGGGGTGGAGGGCACAGACCAGCATTCACCGGCCAGCC 2030
TGGGGTCCAGAAATTTCTTTCTAAGCAATGGTATGGAGAGATTTCCGAGACACCAAGAAGCTGGAAGATT 2100

Fig. 12A (i)

2110 2120 2130 2140 2150 2160 2170

TCCTGTGTCTGTTTATTATACCTTGGTGGGCTGTGGCTTTGTATCATTTAGGAAGAAACCTGTGACA 2170
AGCACAAGAAGCTGCTTTGGTACTATGTGGGCTCTTCACCTCCCCCTTCGTGGTCTTCTCCTGGAATGT 2240
GGTCTTTCTACATCGCTTCTCCTGCTGTTCCTACGTGCTGCTCATGGATTTCCATTTCGGTGCCACAC 2310
CCCCCGAGCTGCTCCTGTACTCCCTGGTCTTTGTCTCTTCTGTGATGAAGTCAGACAGTGGTACGTAA 2380
ATGGGGTGAATTATTTTACTGACCTGTGGAATGTGATGGACACGCTGGGGCTTTTTTACTTCATAGCAGG 2450

2460 2470 2480 2490 2500 2510 2520

AATTGTATTTGGGCTCCACTCTTCTAATAAAAGCTCTTTGTATTCTGGACGAGTCATTTTCTGTCTGGAC 2520
TACATTATTTTCACTCTAAGATTGATCCACATTTTACTGTAAGCAGAAACTTAGGACCCAAGATTATAA 2590
TGCTGCAGAGGAIGCTGATCGATGTGTCTTCTCTCTGTTCTTTGCGGTGTGGATGGTGGCCTTTGG 2660
CGTGGCCAGGCAAGGGATCCTTAGGCAGAAAGAGCAGGCTGGAGGTGGATATTCCGTTCCGGTCATCTAC 2730
GAGCCCTACCTGGCCATGTTTCGSCCAGGTGCCAGTGACGTGGATGGTACCACGTATGACTTGGCCACT 2800

2810 2820 2830 2840 2850 2860 2870

GCACCTTCACTGGGAATGAGTCCAAGCCACTGTGTGTGGAGCTGGATGAGCACAACCTGCCCGGTTCCC 2870
CGAGTGGATCACCATCCCCCTGGTGTGCATCTACATGTTATCCACCAACATCCTGCTGGTCAACCTGCTG 2940
GTCGCCATGTTTGGCTACACGGTGGGCACCGTCCAGGAGAACAATGACCAGGTCTGGAAGTTCAGAGGT 3010
ACTTCTTGGTGCAGGAGTACTGCAGCGCGCTCAATACTCCCTTCCCTTCATGCTCTTGGCTTACTTCTA 3080
CATGGTGTGAAGAAGTGTCTCAAGTGTGTGTGAAGGAGAAAAACATGGAGTCTTCTGTCTGCTGTTTC 3150

3160 3170 3180 3190 3200 3210 3220

AAAAATGAAGACAATGAGACTCTGGCATGGGAGGGTGTGATGAAGGAAAACTACCTTGTCAAGATCAACA 3220
CAAAAACCAACGACACCTCAGAGGAAAAAGAGGCACTGATTTAGACAACTGGATACAAAGCTTAATGATCT 3290
CAAGGGCTCTCTGAAGAGAGATTGCTAATAAAATCAAAATAAACTGTATGAAGCTCTAATGGAGAAAAATC 3360
TAATTATAGCAAGATCATATTAAAGGAATGCTGATGAACAATTTTGTATCGACTACTAAATGAGAGATTT 3430
TCAGACCCCTGGGTACATGGTGGATGATTTTAAATCACCCTAGTGTGCTGAGACCTTGAGAATAAAGTGT 3500

3510 3520 3530 3540 3550 3560 3570

GTGATTGGTTTTCACTTGAAGACGGATATAAAGGAAGAATATTTCTTTTATGTGTTTTCTCCAGAATGGT 3570
GGCTGTTTTCTCTGTGTCTCAATGGCTGGGACTGGAGGTTGATAGTTTTAAGTGTGTCTTACCGCCTCC 3640
TTTTTCTTTAATCTTATTTTGTATGAACACATATAGGAGAACATCTATCTATGAATAAGAACCTGG 3710
TCATGCTTTACTCCTGTATTGTATTTTGTTCATTCCAAATGATTCTCTACTTTTCCCTTTTGTATT 3780
ATGTGACTAATAGTTGGCATATTGTAAAAATCTCTCAAAATTAGGCCAGATTCTAAACATGCTGCAGC 3850

3860 3870 3880 3890 3900 3910 3920

AAGAGGACCCCGCTCTCTTCAGGAAAAAGTGTTCATTCTCAGGATGCTTCTTACCTGTGAGAGGAGGT 3920
GACAAGGGCACTCTCTTGTCTCTTGGACTCACCAGGCTCTTATGAAGGAACACCCCTTCTTAATA 3990
TGTGAAAAGTCCGCCAAAAATGCAACCTTGAAAGGCACCTACTGACTTTGTCTTATTGGATACTCCTCTTA 4060
TTTATTATTTTCCATTAAAAAATAGCTGGCTATTATAGAAAAATTTAGACCATACAGAGATGTAGAAA 4130
GAACATAAATGTCCCCATTACCTTAAGGTAACTGCTAACAATTTCTGGATGGTTTTTCAAGTCTAT 4200

4210 4220 4230 4240 4250 4260 4270

TTTTTTCTATGATGTCTCAATTTCTCTTCAAAATTTACAGAATGTTATCACTACATATATACTTT 4270
TTATGTAAGCTTTTTCACTTAGTATTTTATCAAAATATGTTTTATTATATTCAAGCCTTCTTAACATT 4340
ATATCAATAATTGCATAAATAGGCAACCTCTAGCGATTACATAATTTTGTCTATTGAAGGCTATCTCCAG 4410
TTGATCATTTGGGATGAGCATCTTTGTGCATGAATCCTATTGCTGTATTTGGGAAAAATTTTCAAGGTTAG 4480
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Fig. 12A(2)

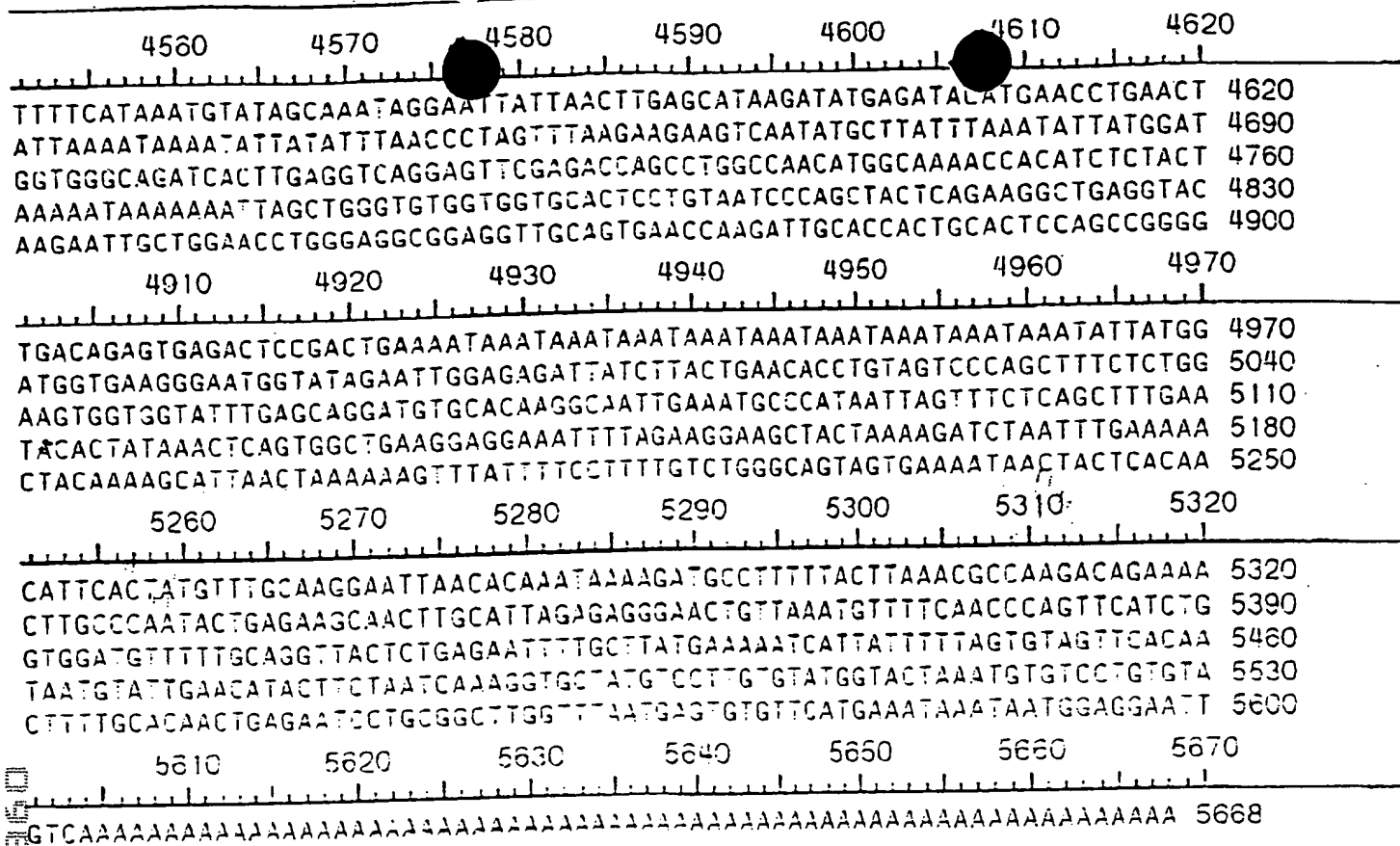


Fig. 12A(3)

10 20 30 40 50 60 70
 MRNRNDTLOSTRTRYSSASRSTOLSYSESOLVNF!QANFKKRECVFFTKDSKATENVCKCGYAQSOHME 70
 GTQINQSEKWNKKHTKEFPTDAFGDIQFETLGKKGKYIRLSCDTDAEILYELLTOHWHLKTPLNIVISVT 140
 GGAKNFALKPRMRKIFSRLLIYIAOSKGAWILTGGTHYGLTKYIGEVVRONTISRSEENIVAIGIAAWGM 210
 VSNRDTLIRNCDAEGYFLAQYLMDDFTRDPLYLONNHTHLLLVDNGCHGHPTVEAKLRNOLEKHISERT 280
 IQDSNYGGKIPIVCFAOGGGKETLKAINTS!KNK!PCVYVEGSGRIADVIASLVEVEDAPTSSAVKEKLV 350
 360 370 380 390 400 410 420
 RFLPRTVSRLSEEETESWIKWLKEILECSHLLTV!KMEEGDEIVSNAISYALYKAFSTSEQOKDNWNGO 420
 LKLLLEWNCLDLANDEIFTNDRRWESADLOEVMFTALIKDRPKFYRLFLEGLNLRKFLTHOVLTELSN 490
 HFSTLVYRNLGIAKNSYNDAALLTFVWKLVANFRRGFRKEORNGRDEMDELHGVSPITRHPLQALFIWAI 560
 LONKKELSKVIWECTRGCTLAALGASKLLKTLAKVKNDINAAGESEELANFETRAVELFTECYSSOEDL 630
 AEQLLVYSCEAWGGSNCLELAVEATDOHFTAQPGVONFLSKQWYGEISROTKNWK!ILCLFIIPLVGCGF 700
 710 720 730 740 750 760 770
 VSFRKKPVCKHKKLLWYYVAFFTSPFVVFVSWNVVFYIAFLLLFAVLLMCFHSPVHPPELVLYSLVFVLF 770
 COEVRQWYVNGVNYFTDLWNVMDTLGLFYFIAGIVFRHSSNKSSLYSGRVIFCLOY!IFTLRLIHIFTV 840
 SRNLGPKIIMLQRMLOVFFFLFLFAYWMVAFGVARGGILRONEQRWRWIFRSVIYEPYLAFFGQVPSOV 910
 DGTYYDFAHCTFTGNESKPLCVLDEHNLPRFENITIPLYCIVMLSTNILLVNLVAMFGYTVGTVGEN 980
 NDCVWKFGRYFLVQEYCSRLNIPFPFIVFAYFMMVKKCFKCCCKEKNMESSVCCFKNEDNETLAWEGVM 1050
 1060 1070 1080 1090 1100 1110 1120
 KENYLVK!NTKANOTSEEMRHRFRQLOTKLNOLKGLKE!ANKIK. 1096

Fig. 12B